

## ABSTRACT OF THE DISCLOSURE

The apparatus receives a load by a load receiving board, selects and switches a combination of a first sensor and a second  
5 sensor, a combination of the second sensor and a third sensor, a combination of the third sensor and a fourth sensor and a combination of the fourth sensor and the first sensor in turn by selection switching means, obtains output differences of all these combinations selected and switched in turn by the  
10 selection switching means in output difference conversion means 14, stores in a memory the output differences obtained in the output difference conversion means, determines in a barycentric position computation section a first directional position (position  $G_y$  with respect to the  $y$  coordinate axis) and a second  
15 directional position (position  $G_x$  with respect to the  $x$  coordinate axis) based on comparisons of the output differences stored in the memory, and outputs the positions in output means.